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10/053,211

01/15/2002

Kilian Pectz

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03/20/2007

REED SMITH, LLP

ATTN: PATENT RECORDS DEPARTMENT

599 LEXINGTON AVENUE, 29TH FLOOR

NEW YORK, NY 10022-7650

EXAMINER

TUROC, DAVID P

ART UNIT

PAPER NUMBER

1762

| SHORTENED STATUTORY PERIOD OF RESPONSE | MAIL DATE | DELIVERY MODE |
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3 MONTHS

03/20/2007

PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

If NO period for reply is specified above, the maximum statutory period will apply and will expire 6 MONTHS from the mailing date of this communication.

Office Action Summary

Application No.

10/053,211

Applicant(s)

PEETZ ET AL.

Examiner

David Turocy

Art Unit

1762

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 30 January 2007.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 2,7-9 and 11-20 is/are pending in the application.
- 4a) Of the above claim(s) 13,14 and 16-18 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 2,7-9,11,15 and 19 is/are rejected.
- 7) ☒ Claim(s) 12 and 20 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- ☐ Notice of References Cited (PTO-892)
- ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- ☐ Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date _____
- ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____
- ☐ Notice of Informal Patent Application
- ☐ Other: _____

DETAILED ACTION

Response to Amendment

1. Applicants amendments, filed 1/30/2007, have been fully considered and reviewed by the examiner. The examiner notes the amendments to claims 15, the cancellation of claims 3 and 10 and the addition of new claims 19-20. Claims 2, 7-9, 11-20 remain pending with claims 13-14, and 16-18 are withdrawn from consideration. In view of the amendment to claim 15 and the cancellation of claims 3 and 10, the 35 USC 1122nd paragraph rejections have been withdrawn.

Response to Arguments

2. Applicant's arguments filed 1/30/2007 have been fully considered but they are not persuasive.

The applicant has argued against the Rey reference, stating that the Rey reference discloses using the carbon fibers within a dilution zone and that the discs are not products of the infiltration process and therefore are not products of the process. The examiner disagrees. As noted by the applicant, Rey discloses the discs are in fact infiltrated and while Rey discloses the substrates within the dilution zone must be sacrificed, Rey clearly discloses that such carbon fibers are in fact densified and are "infiltrated".

The applicant's arguments are not commensurate in scope with the claims. The applicant appears to narrowly be interpreting the claim language. The claim only requires a heat resistant material between the gas fee and the fiber scrims. The claim

does not exclude infiltrating the heat resistant material to a degree and therefore the initial disc can reasonably read on the broad "heat resistant material". The examiner maintains the position that since Rey discloses first contacting a heat resistant material with the precursor gas mixture, such a process must necessarily result in at least some appreciable pre-reacting, since Rey and the present claim teach all the same process steps.

The applicant has argued against the Rey reference stating that the reference fails to disclose the heat resistant material in the reaction space, however, it appears as though the applicant is narrowly interpreting the claim. Clearly, the discs of Rey are within chamber defined by 32, which can broadly be considered the reaction space.

The applicant argues that Rey fails to disclose the concept of pre-reacting, however, as discussed above, Rey discloses the same process steps and therefore the mere observation of still another beneficial result of an old process cannot form the basis of patentability. *Allen et al. v. Coe*, 57 USPQ 136; *In re Maeder et al.* 143 USPQ 249.

The applicant has argued against the examiners assertion that the first disc can broadly be considered the claimed heat resistant material, stating that since the disc is infiltrated it does not correspond to the separate heat resistant material. However, the claims fail to require that the heat resistant material be non-infiltrated or even separate from the fiber preforms.

The applicant has argued against the prior art regarding the process parameters. However, such a statement is not considered persuasive because the applicant has not

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provided any factual evidence to support their position. It is well settled that arguments of counsel unsupported by competent factual evidence of record are entitled to little weight. *In re Payne*, 606 F.2d 303,315, 203 USPQ 245,256 (CCPA 1979).

All other arguments are deemed to be not commensurate in scope with the claims and are therefore deemed moot. Accordingly the rejection of the claims is maintained below.

Claim Objections

3. Claims 11, 12, and 19-20 are objected to because of the following informalities:

Claim 19 requires "wherein the carbon fiber preforms are silicon carbon fiber preforms are generated". Such a phrase should more reasonable be "wherein the carbon fiber preforms or silicon carbon fiber preforms are generated". Appropriate correction is required.

Claim Rejections - 35 USC § 103

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

5. Claims 2, 7-9, 11, 15 and 19 are rejected under 35 U.S.C. 103(a) as being unpatentable over US Patent 5738908 by Rey et al.

Rey discloses a method of producing a composite using CVI into carbon fiber scrims with MTS and hydrogen, wherein the ratio of MTS to H₂ is adjusted within the

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range as claimed (Column 8, column 5, lines 18-25). Rey discloses providing several carbon fiber felts in sequence; therefore the first carbon felt reads on the heat resistant material with a large surface in the reaction zone between the feed and the additional carbon fiber felt and the second and subsequent carbon fiber felts read on a scrims of carbon fiber preform (Column 8, lines 37-41). Rey fails to disclose the carbon fiber felt pre-reacts the process gas or the residual porosity is adjusted. However, the prior art and the present claims, reflected by claim 7, teach all the same process steps and thus the results obtained by applicants process must necessarily be the same as those obtained by the prior art. Therefore by contacting the process gas with a carbon fiber felt, it must necessarily result in pre-reacting the process gas and the porosity as claimed. Either 1) the applicant and the prior art have different definitions for contacting the carbon fiber felt with the process gases, or 2) the applicant is using other process steps or parameters that are not shown in the claims.

Rey discloses a temperature of 1030°C and a pressure of 15 kPa. *A prima facie* case of obviousness exists where the claimed ranges and prior art do not overlap but are close enough that one in ordinary skill in the art would have expected them to have the same properties. *Titanium Metals Corp. of America v. Banner*, 778 F.2d 775, 227 USPQ 773 (Fed. Cir. 1985). See MPEP 2144.05.

Claim 19: Rey discloses the carbon fibers are fixed one above the other at a distance from one another by a binder, where a graphite spacer can broadly interpreted to be a binder (figures, column 8, lines 18-26).

Claim 11: The layers are arranged with 0° angle relative to a main axis of the preform (figures)

Allowable Subject Matter

Claims 12 and 20 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Conclusion

6. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

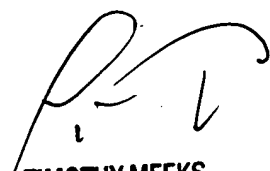
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Any inquiry concerning this communication or earlier communications from the examiner should be directed to David Turocy whose telephone number is (571) 272-2940. The examiner can normally be reached on Monday-Friday 8:30-6:00, No 2nd Friday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Timothy Meeks can be reached on (571) 272-1423. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

David Turocy
AU 1762



TIMOTHY MEEKS
SUPERVISORY PATENT EXAMINER